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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/618,030	07/17/00	BAILEY	1923970555X

QM02/0925  
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EXAMINER  
HWLJ, D

ART UNIT  
3752

PAPER NUMBER

DATE MAILED:

09/25/01

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

# Office Action Summary

Application No.

09/618,030

Applicant(s)

BAILEY, MELBURN D.

Examiner

Davis D Hwu

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3752

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 17 July 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7, 10-14 and 17-20 is/are rejected.
- 7) ☒ Claim(s) 8, 9, 15 and 16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 5 of the instant invention claims the second tube having both an angle of dispersion and no angle of dispersion. It appears that the first and third tubes have an angle of dispersion as recited and that the second tube has an angle of dispersion of zero degrees and the claim will be examined as such.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-4, 6, 7, 11-14, and 17-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Martin.

The patent to Martin shows a nozzle 26 of a gas burner in which the nozzle comprises:

- a body having a first end being attached to a burner (left side of nozzle 26) and a second end (right side of nozzle 26);
- a first tube 28 extending through the body and having a first inlet on the first end of the body and a first outlet on the second end of the body; and

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- a second tube 32 extending through the body, the second tube having a second inlet on the first end of the body and a second outlet on the second end of the body,

wherein the first and second tubes are separate along the entire length of the body (see Figure 2) as recited in claim 2 of the instant invention. The nozzle further comprises a third tube 32 extending through the body, the third tube having a third inlet on the first end of the body and a third outlet on the second end of the body, wherein the third tube is separate from the first and second tubes along the entire length of the body as recited in claims 3 and 4 of the instant invention. The first and second tubes are both linear as recited in claims 6 and 7 of the instant invention. The first and second tubes both maintain a constant cross-sectional area over the length of the nozzle as recited in claims 11 and 12 of the instant invention.

Regarding claims 13 and 14 of the instant invention, each inlet hole is connected to a single outlet hole by a separate linear tube, for example tubes 28 and 32.

5. Claims 13, 14, 19, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Singh.

The patent to Singh shows a nozzle 13 of a burner in which the nozzle comprises a body having a first end adapted to attaché to a burner 27 and a second end, a plurality of separate tubes 17, 20, and 21 extending therethrough, the tubes each having an inlet hole on the first end and an outlet hole on the second end, wherein tube 17 includes a first linear section and a second linear section 18, the second linear section 18 being

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provided a predetermined angle in relation to the first linear section and wherein another of the tubes, for example tube 20 is linear along an entire length thereof.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 5 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin.

The patent to Martin discloses the instant invention including for the first and third tubes 32 having a dispersion angle and the second tube 28 having a dispersion angle of zero (see Figure 2). Martin does not disclose the dispersion angles being from 7 to 15 degrees. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have made the dispersion angles to be from 7 to 15 degrees, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art in order to provide the desired dispersion angles.

***Allowable Subject Matter***

8. Claims 8, 9, 15, and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The patents to Goldberg, Wilton, Crowe, Stadler, Siegmund are pertinent to Applicant's invention in disclosing a burner nozzle.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Davis D Hwu whose telephone number is 703-305-1663. The examiner can normally be reached on M-F 7:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Scherbel can be reached on (703)308-1272. The fax phone numbers for the organization where this application or proceeding is assigned are (703)308-7766 for regular communications and (703)308-7766 for After Final communications.

DDH  
September 5, 2001

A handwritten signature in black ink, appearing to read 'DAS', with a stylized flourish extending from the end.

**David A. Scherbel  
Supervisory Patent Examiner  
Group 3700**